

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A data communication system comprising: a transmitter having first and second transmitting antennae₁~~(36, 38)~~, ~~the signal path of the first antenna (36)~~ having a signal path exhibiting a different delay than ~~the~~ a signal path of the second antenna ~~(38)~~; and a receiver having third and fourth receiving antennae₂~~(36, 38)~~, ~~the signal path of the third antenna (36)~~ having a signal path exhibiting a different delay than ~~the~~ a signal path of the fourth antenna~~(38)~~.
2. (currently amended) The data communication system of claim 1, wherein a nonzero delay of one of the signal paths of the first and second antennae ~~(36, 38)~~ is different from a nonzero delay of one of the signal paths of the third and fourth antennae~~(36, 38)~~.
3. (currently amended) The data communication system of claim 2, wherein ~~the value~~ of one of the nonzero delays is twice that ~~the value~~ of the other nonzero delay.
4. (currently amended) The data communication system of claim 1, wherein the transmitter further comprises a transceiver which is capable of both transmission and reception at different times by means of the first and second antennae~~(36, 38)~~; and wherein the receiver further comprises a transceiver which is capable of both transmission and reception at different times by means of the third and fourth antennae~~(36, 38)~~.
5. (original) The data communication system of claim 1, wherein the data further comprises voice data.
6. (original) The data communication system of claim 1, wherein the data further comprises digital data.

7. (currently amended) The data communication system of claim 1, wherein the RF signal path of the first antenna ~~(36)~~ comprises an RF delay element and an RF adder ~~(40)~~ and the signal path of the second antenna ~~(38)~~ comprises an RF adder~~(40)~~; and wherein the RF signal path of the third antenna ~~(36)~~ comprises an RF delay element and an RF adder~~(40)~~ and the RF signal path of the fourth antenna ~~(38)~~ comprises an RF adder~~(40)~~.

8. (currently amended) The data communication system of claim 1, wherein the transmitter further comprises at least one or more of a coder~~(14)~~ and a guard interval insertion processor~~(20)~~; and wherein the receiver further comprises at least one or more of a decoder ~~(66)~~ responsive to codes utilized by the coder ~~(14)~~ and a guard interval recognition processor ~~(20)~~.

9. (original) The data communication system of claim 1, wherein the delays comprise RF delays.

10. (original) The data communication system of claim 1, wherein the delays comprise IF delays.

11. (original) The data communication system of claim 1, wherein the delays comprise baseband delays.

12. (currently amended) A WLAN system comprising: an access point having a transceiver coupled to first and second transceiving antennae~~(36, 38)~~, ~~the signal path of the first transceiving antenna (36) having a signal path~~ exhibiting a different delay than ~~the a~~ a signal path of the second transceiving antenna~~(38)~~; and one or more mobile terminals~~(80a, 80b, 80c, 80d)~~ each having a transceiver coupled to third and fourth~~(36, 38)~~ transceiving antennae, ~~the signal path of the third transceiving antenna (36) having a signal path~~ exhibiting a different delay than ~~the a~~ a signal path of the fourth transceiving antenna~~(38)~~.

13. (currently amended) The WLAN system of claim 12, wherein a nonzero delay of one of the signal paths of the first and second transceiving antennae ~~(36, 38)~~ is different from a nonzero delay of one of the signal paths of the third and fourth transceiving antennae ~~(36, 38)~~.

14. (currently amended) The WLAN system of claim 13, wherein ~~the value of~~ one of the nonzero delays is twice that ~~the value of~~ the other nonzero delay.

15. (currently amended) The WLAN system of claim 12, wherein ~~the~~ multiple antennae ~~(36, 38)~~ and different delays provide an (L, L) diversity system exhibiting 2L diversity plus 10 log 10(L) dB performance.

16. (original) The WLAN system of claim 12, wherein each transceiver further comprises an OFDM system.

17 (original) The WLAN system of claim 16, wherein the OFDM system utilizes one of binary phase shift keying (BPSK), quadrature phase shift keying (QPSK), 16-quadrature amplitude modulation (16-QAM) or 64-QAM.

18. (currently amended) The WLAN system of claim 12, wherein each transceiver further comprises at least one or more of a coder ~~(14)~~ and a guard interval insertion processor ~~(20)~~; and at least one or more of a decoder ~~(66)~~ responsive to codes utilized by the coder ~~(14)~~ and a guard interval recognition processor ~~(20)~~.

19 (original) The WLAN system of claim 12, wherein the delays comprise RF delays.

20 (original) The WLAN system of claim 12, wherein the delays comprise IF delays.

21 (original) The WLAN system of claim 12, wherein the delays comprise baseband delays.